

1 **R307. Environmental Quality, Air Quality.**

2 **R307-204. Emission Standards: Smoke Management.**

3 **R307-204-1. Purpose and Goals.**

4 (1) The purpose of R307-204 is to establish by rule
5 procedures that mitigate the impact on public health and
6 visibility of prescribed fire and wildland fire.

7
8 **R307-204-2. Applicability.**

9 (1) R307-204 applies to all persons using prescribed fire or
10 wildland fire on land they own or manage.

11 (2) R307-204 does not apply to agricultural activities
12 specified in 19-2-114 and to those regulated under R307-202, or to
13 activities otherwise permitted under R307.

14
15 **R307-204-3. Definitions.**

16 The following additional definitions apply only to R307-204.

17 "Annual Emissions Goal" means the annual establishment of a
18 planned quantitative value of emissions reductions from prescribed
19 fire.

20 "Best Management Practices" means smoke management and
21 dispersion techniques used during a prescribed fire or a wildland
22 fire use[~~d~~] event [~~for resource benefit~~] that affect the direction,
23 duration, height or density of smoke.

24 "Burn Plan" means the plan required for each fire ignited by
25 managers or allowed to burn.

26 "Burn Window" means the period of time during which the
27 prescribed fire is scheduled for ignition.

28 "Emission Reduction Techniques (ERT)" mean techniques for
29 controlling emissions from prescribed fires to minimize the amount
30 of emission output per unit or acre burned.

31 "Federal Class I Area" means any Federal land that is
32 federally classified or reclassified Class I.

33 "Fire Prescription" means the measurable criteria that define
34 conditions under which a prescribed fire may be ignited, guide
35 selection of appropriate management responses, and indicates other
36 required actions. Prescription criteria may include but are not
37 limited to safety, economic, public health, environmental,
38 geographic, administrative, social, or legal considerations.

39 "Land Manager" means any federal, state, local or private
40 entity that owns, administers, directs, oversees or controls the
41 use of public or private land, including the application of fire
42 to the land.

43 "Non-burning Alternatives to Fire" means non-burning
44 techniques that are used to achieve a particular land management
45 objective, including but not limited to reduction of fuel loading,
46 manipulation of fuels, enhancement of wildlife habitat, and
47 ecosystem restructuring. These alternatives are designed to
48 replace the use of fire for at least the next five years.

49 "Particulate Matter" means the liquid or solid particles such
50 as dust, smoke, mist, or smog found in air emissions.

1 "Pile" means natural materials or debris resulting from some
2 type of fuels management practice that have been relocated either
3 by hand or machinery into a concentrated area.

4 "Pile Burning" means burning of individual piles.

5 "Prescribed Fire or Prescribed Burn" means any fire ignited
6 by management actions to meet specific objectives, such as
7 achieving resource benefits.

8 ~~["Particulate Matter" means the liquid or solid particles~~
9 ~~such as dust, smoke, mist, or smog found in air emissions.]~~

10 "Smoke Sensitive Receptors" means population centers such as
11 towns and villages, campgrounds and trails, hospitals, nursing
12 homes, schools, roads, airports, Class I areas, nonattainment and
13 maintenance areas, areas whose air quality monitoring data
14 indicate pollutant levels that are close to health standards, and
15 any other areas where smoke and air pollutants can adversely
16 affect public health, safety and welfare.

17 "Wildland" means an area in which development is essentially
18 non-existent, except for pipelines, power lines, roads, railroads,
19 or other transportation or conveyance facilities. Structures, if
20 any, are widely scattered.

21 "Wildland Fire" means any non-structure fire, other than
22 prescribed fire, that occurs in the wildland.

23 ~~"Wildland Fire Use[d for Resource Benefits (WFURB)]Event"~~
24 means naturally ignited wildland fire that is managed to
25 accomplish specific prestated resource management objectives in
26 predefined geographic areas.

27 "Wildland Fire Implementation Plan" means the plan required
28 for each fire that is allowed to burn.

29 "Wildland Fire Implementation Plan Stage I" means the initial
30 wildland fire planning document. It is developed for fires with a
31 low potential of spread and negative impacts.

32 "Wildland Fire Implementation Plan Stage II" means a more
33 detailed wildland fire planning document. It is developed for
34 larger more active fires with a greater potential for geographic
35 extent.

36 **R307-204-4. General Requirements.**

37 (1) Management of On-Going Fires. If, after consultation
38 with the land manager, the executive secretary determines that a
39 prescribed fire, wildland fire use~~[d for resource benefits]~~ event,
40 wildland fire, or any smoke transported from other locations, is
41 degrading air quality to levels that could violate the National
42 Ambient Air Quality Standards or burn plan conditions, the land
43 manager shall promptly stop igniting additional prescribed fires.

44 (2) Emissions Calculations. In calculating emissions
45 information required under R307-204, each land manager shall use
46 emission factors approved by the executive secretary.

47 (3) Non-burning Alternatives to Fire. Beginning in 2004 and
48 annually thereafter, each land manager shall submit to the
49 executive secretary by March 15 a list of areas treated using non-
50 burning alternatives to fire during the previous calendar year,
51 including the number of acres, the specific types of alternatives
52 used, and the location of these areas.

1 (4) Annual Emissions Goal. The executive secretary shall
2 provide an opportunity for an annual meeting with land managers
3 for the purpose of evaluation and adoption of the annual emission
4 goal. The annual emission goal shall be developed in cooperation
5 with states, federal land management agencies and private
6 entities, to control prescribed fire emissions increases to the
7 maximum feasible extent.

8 (5) Long-term Fire Projections. Each land manager shall
9 provide to the executive secretary by March 15 annually long-term
10 projections of future prescribed fire ~~[and wildland fire used for~~
11 ~~resource benefits]~~ activity for annual assessment of visibility
12 impairment.

13
14 **R307-204-5. Burn Schedule.**

15 (1) Any land manager planning prescribed fire burning more
16 than 50 acres per year shall submit the burn schedule to the
17 executive secretary on forms provided by the Division of Air
18 Quality, and shall include the following information for all fires
19 including those smaller than 50 acres:

20 (a) Project number and project name;

21 (b) Air Quality Basin, UTM coordinate for the central point
22 of the prescribed fire, project elevation, and county;

23 (c) Total project acres, description of major fuels, type of
24 burn, ignition method, and planned use of emission reduction
25 techniques to support establishment of the annual emissions goal;

26 (d) Earliest burn date and burn duration.

27 (2) Each land manager shall submit each year's burn schedule
28 no later than March 15 of that year.

29 (3) Any land manager who makes changes to the burn schedule
30 shall submit an amendment to the burn schedule within 10 days
31 after the change.

32
33 **R307-204-6. Small Prescribed Fires.**

34 (1) A prescribed fire that covers less than 20 acres per
35 burn~~[and results in air emissions less than 0.5 tons of~~
36 ~~particulate matter per day]~~ shall be ignited only when the
37 clearing index is 500 or greater.

38 (2) A prescribed fire that covers less than 20 acres per
39 burn maybe ignited when the National Weather Service Clearing
40 Index is between 500 and 400 under a conditional basis with
41 approval of the executive secretary.

42 (a) The prescribed fire should be recorded as a de minimis
43 prescribed fire on the Utah Annual Burn Schedule.

44 (b) The Land Manager is required to notify the executive
45 secretary by fax, e-mail, or phone prior to ignition of the burn
46 when burning below a National Weather Service Clearing Index is
47 between 500 and 400.

48 (c) Additional reporting requirements including hourly
49 photographs, a record of any complaints, hourly meteorological
50 conditions and an hourly description of the smoke plume must be
51 recorded and submitted.

R307-204-7. Small Prescribed Pile Fires (de minimis).

(1) Pile burns covering up to 30,000 cubic feet per day shall be ignited only when the clearing index is 500 or greater.

(2) Pile burns covering up to 30,000 cubic feet per maybe ignited when the National Weather Service Clearing Index is between 500 and 400 under a conditional basis with approval of the executive secretary.

(a) The pile fire should be recorded as a de minimis prescribed fire on the Utah Annual Burn Schedule.

(b) The Land Manager is required to notify the executive secretary by fax, e-mail, or phone prior to ignition of the burn when burning below a National Weather Service Clearing Index is between 500 and 400.

(c) Additional reporting requirements including hourly photographs, a record of any complaints, hourly meteorological conditions and an hourly description of the smoke plume must be recorded and submitted.

R307-204-[7]8. Large Prescribed Fires.

(1) Burn Plan. For a prescribed fire that covers 20 acres[~~or more per burn or results in air emissions of 0.5 tons or more of particulate matter per day~~], the land manager shall submit to the executive secretary a burn plan, including a fire prescription, upon request.

(2) Pre-Burn Information. For a prescribed fire that covers 20 acres or more per burn[~~or results in air emissions of 0.5 tons or more of particulate matter per day~~], the land manager shall submit pre-burn information to the executive secretary at least two weeks before the beginning of the burn window. The pre-burn information shall be submitted to the executive secretary on the form provided by the Division of Air Quality by fax, electronic mail or postal mail and shall include the following information:

(a) The three-letter ID, project number, date submitted, name of person submitting the form, burn manager, and phone numbers;

(b) Summary of burn objectives, such as restoration or maintenance of ecological functions or indication of fire resiliency;

(c) Any sensitive receptor within 15 miles, including any Class I or nonattainment or maintenance area, and distance and direction in degrees from the project site;

(d) Planned mitigation methods;

(e) The smoke dispersion or visibility model used and results;

(f) The estimated amount of total particulate matter anticipated;

(g) A description of how the public and land managers in neighboring states will be notified;

(h) A map[~~, preferably with a scale of 1:62,500,~~] depicting both the daytime and nighttime smoke path and down-drainage flow for a minimum of 15 miles from the burn site with smoke-sensitive areas delineated;

1 (i) Safety and contingency plans for addressing any smoke
2 intrusions; and

3 (j) If the fire is in a nonattainment or maintenance area
4 and is subject to general conformity (42 U.S.C. 7506(c)), a copy
5 of the conformity demonstration showing that the fire meets the
6 requirements of the Clean Air Act and conforms with the applicable
7 State Implementation Plan.

8 (k) Planned use of emission reduction techniques to support
9 establishment of an annual emissions goal, if not already
10 submitted under R307-204-5.

11 (l) Any other information needed by the executive secretary
12 for smoke management purposes, or for assessment of contribution
13 to visibility impairment in any Class I area.

14 (3) Burn Request.

15 (a) The land manager shall submit to the executive secretary
16 a burn request on the form provided by the Division of Air Quality
17 by ~~[10:00 a.m.]~~1000 hours at least two business days before the
18 planned ignition time. The form may be submitted by fax or
19 electronic mail, and must include the following information:

20 (i) The three-letter identification and project number
21 consistent with the annual burn schedule required in R307-204-5(1)
22 above;

23 (ii) The date submitted and by whom; and

24 (iii) The burn manager conducting the burn and phone
25 numbers.

26 (b) No prescribed fire requiring a burn plan shall be
27 ignited before the executive secretary approves or conditionally
28 approves the burn request.

29 (c) If a prescribed fire is delayed, changed or not
30 completed following burn approval, any significant changes in the
31 burn plan shall be submitted to the executive secretary before the
32 burn request is submitted. If a prescribed fire is not carried
33 out, the land manager shall list the reasons on the burn request
34 form provided by the Division of Air Quality and shall submit the
35 form by fax or electronic mail to the executive secretary by ~~[8:00~~
36 ~~a.m.]~~0800 hours the following business day.

37 (4) Daily Emissions Report. By ~~[8:00 a.m.]~~0800 hours on the
38 day following the prescribed burn, for each day of prescribed fire
39 activity covering ~~[50]~~20 acres or more, the land manager shall
40 submit to the executive secretary a daily emission report on the
41 form provided by the Division of Air Quality including the
42 following information:

43 (a) The three-letter identification and project number
44 consistent with the annual burn schedule required in R307-204-5(1)
45 above;

46 (b) The date submitted and by whom;

47 (c) The start and end dates and times of the burn;

48 (d) Emission information including black acres, tons fuel
49 consumed per acre, and tons particulate matter produced;

50 (e) Public interest regarding smoke;

51 (f) Daytime ventilation;

52 (g) Nighttime smoke behavior;

1 (h) Evaluation of the techniques used by the land manager to
2 reduce emissions or manage the smoke from the prescribed burn; and

3 (i) Emission reduction techniques applied.

4 (5) Emission Reduction and Dispersion Techniques. Each land
5 manager shall take measures to prevent smoke impacts. Such
6 measures may include best management practices such as dilution,
7 emission reduction or avoidance in addition to others described in
8 the pre-burn information form provided by the Division of Air
9 Quality. An evaluation of the techniques shall be included in the
10 daily emissions report required by (4) above.

11 (6) Monitoring. Land managers shall monitor the effects of
12 the prescribed fire on smoke sensitive receptors and on visibility
13 in Class I areas, as directed by the burn plan. Hourly visual
14 monitoring and documentation of the direction of the smoke plume
15 shall be recorded on the form provided by the Division of Air
16 Quality or on the land manager's equivalent form. Complaints from
17 the public shall be noted in the project file. Records shall be
18 available for inspection by the executive secretary for six months
19 following the end of the fire.
20

21 **R307-204-9. Large Prescribed Pile Fires.**

22 (1) Burn Plan. For a prescribed pile fire that covers
23 30,000 cubic feet, the land manager shall submit to the executive
24 secretary a burn plan, including a fire prescription, upon
25 request.

26 (2) Pre-Burn Information. For a prescribed pile fire that
27 covers 20 acres or more per burn, the land manager shall submit
28 pre-burn information to the executive secretary at least two weeks
29 before the beginning of the burn window. The pre-burn information
30 shall be submitted to the executive secretary on the form provided
31 by the Division of Air Quality by fax, electronic mail or postal
32 mail and shall include the following information:

33 (a) The three-letter ID, project number, date submitted,
34 name of person submitting the form, burn manager, and phone
35 numbers;

36 (b) Summary of burn objectives, such as restoration or
37 maintenance of ecological functions or indication of fire
38 resiliency;

39 (c) Any sensitive receptor within 15 miles, including any
40 Class I or nonattainment or maintenance area, and distance and
41 direction in degrees from the project site;

42 (d) Planned mitigation methods;

43 (e) The smoke dispersion or visibility model used and
44 results;

45 (f) The estimated amount of total particulate matter
46 anticipated;

47 (g) A description of how the public and land managers in
48 neighboring states will be notified;

49 (h) A map depicting both the daytime and nighttime smoke
50 path and down-drainage flow for a minimum of 15 miles from the
51 burn site with smoke-sensitive areas delineated;

1 (i) Safety and contingency plans for addressing any smoke
2 intrusions; and

3 (j) If the fire is in a nonattainment or maintenance area
4 and is subject to general conformity (42 U.S.C. 7506(c)), a copy
5 of the conformity demonstration showing that the fire meets the
6 requirements of the Clean Air Act and conforms with the applicable
7 State Implementation Plan.

8 (k) Planned use of emission reduction techniques to support
9 establishment of an annual emissions goal, if not already
10 submitted under R307-204-5.

11 (l) Any other information needed by the executive secretary
12 for smoke management purposes, or for assessment of contribution
13 to visibility impairment in any Class I area.

14 (3) Burn Request.

15 (a) The land manager shall submit to the executive secretary
16 a burn request on the form provided by the Division of Air Quality
17 by 1000 hours at least two business days before the planned
18 ignition time. The form may be submitted by fax or electronic
19 mail, and must include the following information:

20 (i) The three-letter identification and project number
21 consistent with the annual burn schedule required in R307-204-5(1)
22 above;

23 (ii) The date submitted and by whom; and

24 (iii) The burn manager conducting the burn and phone
25 numbers.

26 (b) No prescribed pile fire requiring a burn plan shall be
27 ignited before the executive secretary approves or conditionally
28 approves the burn request.

29 (c) If a prescribed pile fire is delayed, changed or not
30 completed following burn approval, any significant changes in the
31 burn plan shall be submitted to the executive secretary before the
32 burn request is submitted. If a prescribed fire is not carried
33 out, the land manager shall list the reasons on the burn request
34 form provided by the Division of Air Quality and shall submit the
35 form by fax or electronic mail to the executive secretary by 0800
36 hours the following business day.

37 (4) Daily Emissions Report. By 0800 hours on the day
38 following the prescribed pile burn, for each day of pile fire
39 activity covering 30,000 cubic feet or more, the land manager
40 shall submit to the executive secretary a daily emission report on
41 the form provided by the Division of Air Quality including the
42 following information:

43 (a) The three-letter identification and project number
44 consistent with the annual burn schedule required in R307-204-5(1)
45 above;

46 (b) The date submitted and by whom;

47 (c) The start and end dates and times of the burn;

48 (d) Emission information including black acres, tons fuel
49 consumed per acre, and tons particulate matter produced;

50 (e) Public interest regarding smoke;

51 (f) Daytime ventilation;

52 (g) Nighttime smoke behavior;

1 (h) Evaluation of the techniques used by the land manager to
2 reduce emissions or manage the smoke from the prescribed pile
3 burn; and

4 (i) Emission reduction techniques applied.

5 (5) Emission Reduction and Dispersion Techniques. Each land
6 manager shall take measures to prevent smoke impacts. Such
7 measures may include best management practices such as dilution,
8 emission reduction or avoidance in addition to others described in
9 the pre-burn information form provided by the Division of Air
10 Quality. An evaluation of the techniques shall be included in the
11 daily emissions report required by (4) above.

12 (6) Monitoring. Land managers shall monitor the effects of
13 the prescribed pile fire on smoke sensitive receptors and on
14 visibility in Class I areas, as directed by the burn plan. Hourly
15 visual monitoring and documentation of the direction of the smoke
16 plume shall be recorded on the form provided by the Division of
17 Air Quality or on the land manager's equivalent form. Complaints
18 from the public shall be noted in the project file. Records shall
19 be available for inspection by the executive secretary for six
20 months following the end of the fire.

21
22 **R307-204-[8]10. Requirements for Wildland Fire [~~with Potential~~**
23 **~~for Use Events for Resource Benefits~~].**

24 (1) Burn Approval Required.

25 (a) The land manager shall notify the executive secretary
26 [by the close of business of the first day of any wildland fire
27 that covers 20 acres or more. The notification shall include the
28 following information]of any potential wildland fire use
29 (WFU)event having a wildland fire implementation plan (WFIP)
30 Stage I. The following information will be provided:

31 (i) UTM coordinate of the fire;

32 (ii) Active burning acres;

33 (iii) Probable fire size and daily anticipated growth in
34 acres;

35 (iv) Types of wildland fuel involved;

36 (v) An emergency telephone number that is answered 24 hours
37 a day;[~~and~~]

38 (vi) Wilderness or Resource Natural Area designation, if
39 applicable[~~-~~];

40 (vii) Distance to nearest community;

41 (viii) Elevation of fire; and

42 (ix) Fire's airshed number.

43 (b) [The following information shall be submitted to the
44 executive secretary 48 hours after submittal of the information
45 required by (1)(a) above]The Land Managers shall notify the
46 executive secretary of any potential wildland fire use (WFU)
47 event covering more than 20 acres or having a WFIP Stage II. In
48 addition to the information required for a WFU with a WFIP Stage
49 I, the following additional information will be provided to the
50 executive secretary as it is being developed:

51 (i) WFIP Stage II [W]wildland fire implementation plan and
52 anticipated emissions;

1 (ii) A map depicting both the daytime and nighttime smoke
2 path and down-drainage flow for a minimum of 15 miles from the
3 burn site with smoke-sensitive areas delineated; and

4 (iii) Additional computer smoke modeling, if requested by
5 the executive secretary.

6 (c) The executive secretary's approval of the smoke
7 management element of the wildland fire implementation plan shall
8 be obtained before managing the fire as a wildland fire use[~~at~~]
9 event[~~for resource benefits~~].

10 (2) Daily Emission Report for [W]wildland [F]fire [U]use[~~at~~]
11 event[~~for Resource Benefits~~]. By [~~8:00 a.m.~~]0800 hours on the
12 business day following fire activity covering [~~50~~]20 acres or
13 more, the land manager shall submit to the executive secretary the
14 daily emission report on the form provided by the Division of Air
15 Quality, including the following information:

16 (a) The three-letter identification, project number, Air
17 Quality Basin, and name of the burn manager;

18 (b) UTM coordinate;

19 (c) Dates and times of the start and end of the burn;

20 (d) Black acres by wildland fuel type;

21 (e) Estimated proportion of wildland fuel consumed by
22 wildland fuel type;

23 (f) Proportion of moisture in the wildland fuel by size
24 class;

25 (g) Emission estimates;

26 (h) Level of public interest or concern regarding smoke; and

27 (i) Conformance to the wildland fire implementation plan.

28 (3) Monitoring. The land manager shall monitor the effects
29 of smoke on smoke sensitive receptors and visibility in Class I
30 areas as directed by the wildland fire implementation plan.

31 Complaints from the public shall be recorded in the project file.

32 Records shall be available for inspection by the executive
33 secretary for six months following the end of the fire.

34
35 **KEY: air quality, wildland fire, smoke, land manager**

36 **[~~July 7, 2005~~]2006**

37 **19-2-104(1)(a)**

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39